

PATENT COOPERATION TREATY

PCT

INTERNATIONAL SEARCH REPORT

(PCT Article 18 and Rules 43 and 44)

Applicant's or agent's file reference D 2003.795 WO	FOR FURTHER ACTION <div style="text-align: right; font-size: small;">see Form PCT/ISA/220 as well as, where applicable, item 5 below.</div>	
International application No. PCT/US2004/018992	International filing date (day/month/year) 15/06/2004	(Earliest) Priority Date (day/month/year) 24/06/2003
Applicant AKZO NOBEL N.V.		

This International Search Report has been prepared by this International Searching Authority and is transmitted to the applicant according to Article 18. A copy is being transmitted to the International Bureau.

This International Search Report consists of a total of 4 sheets.

☒ It is also accompanied by a copy of each prior art document cited in this report.

1. Basis of the report

- a. With regard to the language, the international search was carried out on the basis of the international application in the language in which it was filed, unless otherwise indicated under this item.

☐ The international search was carried out on the basis of a translation of the international application furnished to this Authority (Rule 23.1(b)).

- b. ☐ With regard to any nucleotide and/or amino acid sequence disclosed in the international application, see Box No. I.

2. ☐ Certain claims were found unsearchable (See Box II).

3. ☐ Unity of invention is lacking (see Box III).

4. With regard to the title,

☒ the text is approved as submitted by the applicant.

☐ the text has been established by this Authority to read as follows:

5. With regard to the abstract,

☒ the text is approved as submitted by the applicant.

☐ the text has been established, according to Rule 38.2(b), by this Authority as it appears in Box No. IV. The applicant may, within one month from the date of mailing of this international search report, submit comments to this Authority.

6. With regards to the drawings,

- a. the figure of the drawings to be published with the abstract is Figure No. 2

☒ as suggested by the applicant.

☐ as selected by this Authority, because the applicant failed to suggest a figure.

☐ as selected by this Authority, because this figure better characterizes the invention.

- b. ☐ none of the figures is to be published with the abstract.

INTERNATIONAL SEARCH REPORT

International Application No

PCT/US2004/018992

A. CLASSIFICATION OF SUBJECT MATTER

IPC 7 C07K1/18

Corrected version

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC 7 C07K

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

EPO+Internal, BIOSIS, EMBASE, WPI Data, PAJ

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	<p>FRANKEN K L M C ET AL: "Purification of His-Tagged Proteins by Immobilized Chelate Affinity Chromatography: The Benefits from the Use of Organic Solvent"</p> <p>PROTEIN EXPRESSION AND PURIFICATION, ACADEMIC PRESS, SAN DIEGO, CA, US, vol. 18, no. 1, February 2000 (2000-02), pages 95-99, XP004435586</p> <p>ISSN: 1046-5928</p> <p>cited in the application</p> <p>page 97, right-hand column, paragraph 3 -</p> <p>page 98, left-hand column, paragraph 3</p> <p>-----</p> <p>-/-</p>	1-18

☒ Further documents are listed in the continuation of box C.☒ Patent family members are listed in annex.

* Special categories of cited documents:

- "A" document defining the general state of the art which is not considered to be of particular relevance
- "E" earlier document but published on or after the international filing date
- "L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)
- "O" document relating to an oral disclosure, use, exhibition or other means
- "P" document published prior to the international filing date but later than the priority date claimed

- "T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
- "X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
- "Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art
- "&" document member of the same patent family

Date of the actual completion of the international search

16 December 2004

Date of mailing of the international search report

28.12.2004

Name and mailing address of the ISA

European Patent Office, P.B. 5818 Patentlaan 2
 NL - 2280 HV Rijswijk
 Tel. (+31-70) 340-2040, Tx. 31 651 epo nl
 Fax: (+31-70) 340-3016

Authorized officer

Ury, A

INTERNATIONAL SEARCH REPORT

International Application No.

PCT/US2004/018992

C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A .	PETSCH DAGMAR ET AL: "Endotoxin removal from protein solutions" JOURNAL OF BIOTECHNOLOGY, vol. 76, no. 2-3, 21 January 2000 (2000-01-21), pages 97-119, XP002296265 ISSN: 0168-1656 cited in the application page 103, left-hand column, paragraph 2 page 115, left-hand column, paragraph 2 abstract	1-18
A	BISCHOFF R ET AL: "PURIFICATION AND BIOCHEMICAL CHARACTERIZATION OF RECOMBINANT X1-ANTITRYPSIN VARIANTS EXPRESSED IN ESCHERICHIA COLI" BIOCHEMISTRY, AMERICAN CHEMICAL SOCIETY. EASTON, PA, US, vol. 30, no. 14, 9 April 1991 (1991-04-09), pages 3464-3472, XP000179424 ISSN: 0006-2960 page 3465, left-hand column, last paragraph - right-hand column, paragraph 3 page 3469, paragraph 2	1-18
A	US 4 248 862 A (ELLWOOD DEREK C ET AL) 3 February 1981 (1981-02-03) the whole document	1-18
A	EP 0 407 037 A (MERCK & CO INC) 9 January 1991 (1991-01-09) the whole document	1-18
A	US 4 832 751 A (DOMELSMITH LINDA N ET AL) 23 May 1989 (1989-05-23) the whole document	1-18
A	US 5 045 456 A (RIENSTRA MARK S ET AL) 3 September 1991 (1991-09-03) the whole document	1-18
A	WO 99/63076 A (IMMUNE RESPONSE CORP INC) 9 December 1999 (1999-12-09) the whole document	1-18

INTERNATIONAL SEARCH REPORT

Information on patent family members

International Application No

PCT/US2004/018992

Patent document cited in search report		Publication date	Patent family member(s)	Publication date
US 4248862	A	03-02-1981	AU 522139 B2	20-05-1982
			AU 4433779 A	23-08-1979
			CA 1126155 A1	22-06-1982
			DE 2961293 D1	14-01-1982
			EP 0004137 A1	19-09-1979
			GB 2014452 A ,B	30-08-1979

EP 0407037	A	09-01-1991	CA 2018709 A1	12-12-1990
			CY 1982 A	05-09-1997
			DE 69012682 D1	27-10-1994
			EP 0407037 A1	09-01-1991
			HK 8097 A	24-01-1997
			JP 2878788 B2	05-04-1999
			JP 3095201 A	19-04-1991
			US 5019502 A	28-05-1991
			US 5045456 A	03-09-1991
			US 5039610 A	13-08-1991

US 4832751	A	23-05-1989	NONE	

US 5045456	A	03-09-1991	CA 2018709 A1	12-12-1990
			CY 1982 A	05-09-1997
			DE 69012682 D1	27-10-1994
			EP 0407037 A1	09-01-1991
			HK 8097 A	24-01-1997
			JP 2878788 B2	05-04-1999
			JP 3095201 A	19-04-1991

WO 9963076	A	09-12-1999	AU 4314099 A	20-12-1999
			WO 9963076 A1	09-12-1999
